LISTING OF CLAIMS

In the Claims:

Please amend the claims in the below-indicated manner. This listing of claims replaces all prior versions, and listings, of claims in the application:

1-8. (cancelled)

9. (currently amended) A method of processing a semiconductor structure, comprising:

depositing a light-degradable surface coupling agent on a semiconductor substrate, the light-degradable surface coupling agent losing its adhesion properties upon exposure to light;

depositing a resist over the light-degradable surface coupling agent;

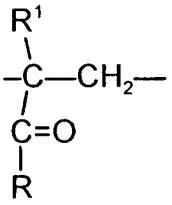
irradiating portions of the resist, wherein the light-degradable surface coupling agent under the irradiated portions of the resist at least partially decomposes; and

developing the resist.

10. (original) The method of claim 9, wherein the light-degradable surface coupling agent comprises one or more selected from the group consisting of lactic acid polymers, lactic acid copolymers, polymers and copolymers containing side chain ketone groups, mixtures of polymers and an organometallic compound or a metal salt, and functionalized siloxanes.

11. (currently amended) The method of claim 9, wherein the light-degradable surface coupling agent comprises monomers of lactic acid and optionally one or more modifying monomers selected from the group consisting of glycols, p-dioxanone, ~~1,5 dioxepan-2-one,~~ 1,5-dioxepan-2-one, and 1,4-oxathialan-2-one~~, and 4,4-dioxide~~.

12. (original) The method of claim 9, wherein the light-degradable surface coupling agent comprises a polymer or copolymer comprising side chain ketone groups, wherein the ketone groups are represented by the chemical structure:



where R is an alkyl, cycloalkyl, aryl, alkenyl, or alkaryl group containing from one to about 10 carbon atoms and R^1 is hydrogen or an alkyl, cycloalkyl, aryl, or alkaryl group containing from one to about 7 carbon atoms.

13. (original) The method of claim 12, wherein the polymer or copolymer comprises a polyester, a polyamide, or a polyurethane.

14. (original) The method of claim 9, wherein the light-degradable surface coupling agent forms a thin film having a thickness from about 50 Å to about 500 Å.

15. (currently amended) A method of increasing adhesion between non-irradiated portions of a resist and a semiconductor substrate while improving removal of irradiated portions of the resist from the semiconductor substrate during development, comprising:

employing a light-degradable surface coupling agent having a thickness from about 10 Å to about 1,000 Å between the resist and the semiconductor substrate, the light-degradable surface coupling agent losing its adhesion properties upon exposure to light.

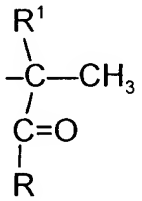
16. (original) The method of claim 15, wherein the light-degradable surface coupling agent comprises one or more selected from the group consisting of lactic acid polymers, lactic acid copolymers, polymers and copolymers containing side chain

ketone groups, mixtures of polymers and an organometallic compound or a metal salt, and functionalized siloxanes.

17. (currently amended) The method of claim 15, wherein light-degradable surface coupling agent comprises monomers of lactic acid and optionally one or more modifying monomers selected from the group consisting of glycols, p-dioxanone, ~~1,5-dioxepan-2-one,~~ 1,5-dioxepan-2-one, and 1,4-oxathialan-2-one~~, and 4,4-dioxide~~.

18. (original) The method of claim 15, wherein the light-degradable surface coupling agent comprises mixtures of a polymer and an organometallic compound or a metal salt, and the polymer comprises a polyolefin or a polyvinyl alcohol.

19. (original) The method of claim 15, wherein the light-degradable surface coupling agent comprises a functionalized siloxane made by coupling a ketone group with a silicon containing compound, the ketone group represented by the chemical structure:



where R is an alkyl, cycloalkyl, aryl, alkenyl, or alkaryl group containing from one to about 10 carbon atoms and R^1 is hydrogen or an alkyl, cycloalkyl, aryl, or alkaryl group containing from one to about 7 carbon atoms, the silicon containing compound comprising at least one selected from the group consisting of silane, hexamethyldisilazane, trimethylsilyldiethylamine, trimethylsilyldimethylamine, dimethylsilyldiethylamine, dimethylsilyldimethylamine, tetramethyldisilazane, trimethylmethoxysilane, trimethylethoxysilane, trimethylpropoxysilane, trimethylacetoxysilane, bis(dimethylamino)dimethylsilane, bis(dimethylamino)methylsilane, methyldimethylaminoethoxysilane,

methyldimethoxysilane, methyldiethyoxysilane, dimethyldimethoxysilane, dimethyldiethoxysilane, and methyltrimethoxysilane.

20-24. (cancelled)

25. (new) A method of processing a semiconductor structure, comprising:

depositing a light-degradable surface coupling agent on a semiconductor substrate, the light-degradable surface coupling agent having a polar surface and a non-polar surface, the light-degradable surface coupling agent losing its adhesion properties upon exposure to light;

depositing a resist over the light-degradable surface coupling agent;

irradiating portions of the resist, wherein the light-degradable surface coupling agent under the irradiated portions of the resist at least partially decomposes; and

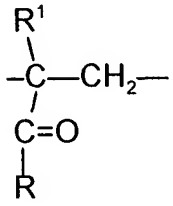
developing the resist.

26. (new) The method of claim 25, wherein the light-degradable surface coupling agent comprises one or more selected from the group consisting of lactic acid polymers, lactic acid copolymers, polymers and copolymers containing side chain ketone groups, mixtures of polymers and an organometallic compound or a metal salt, and functionalized siloxanes.

27. (new) The method of claim 25, wherein the light-degradable surface coupling agent comprises monomers of lactic acid and optionally one or more modifying monomers selected from the group consisting of glycols, p-dioxanone, 1,5-dioxepan-2-one, and 1,4-oxathialan-2-one.

28. (new) The method of claim 25, wherein the light-degradable surface coupling agent comprises a polymer or copolymer comprising side chain ketone groups, wherein

the ketone groups are represented by the chemical structure:



where R is an alkyl, cycloalkyl, aryl, alkenyl, or alkaryl group containing from one to about 10 carbon atoms and R^1 is hydrogen or an alkyl, cycloalkyl, aryl, or alkaryl group containing from one to about 7 carbon atoms.

29. (new) The method of claim 28, wherein the polymer or copolymer comprises a polyester, a polyamide, or a polyurethane.

30. (new) The method of claim 9, wherein the light-degradable surface coupling agent forms a thin film having a thickness from about 50 Å to about 500 Å.

31. (new) A method of increasing adhesion between non-irradiated portions of a resist and a semiconductor substrate while improving removal of irradiated portions of the resist from the semiconductor substrate during development, comprising:

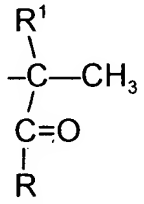
employing a light-degradable surface coupling agent having a thickness from about 10 Å to about 1,000 Å between the resist and the semiconductor substrate, the light-degradable surface coupling agent having a polar surface and a non-polar surface, the light-degradable surface coupling agent losing its adhesion properties upon exposure to light.

32. (new) The method of claim 31, wherein the light-degradable surface coupling agent comprises one or more selected from the group consisting of lactic acid polymers, lactic acid copolymers, polymers and copolymers containing side chain ketone groups, mixtures of polymers and an organometallic compound or a metal salt, and functionalized siloxanes.

33. (new) The method of claim 31, wherein light-degradable surface coupling agent comprises monomers of lactic acid and optionally one or more modifying monomers selected from the group consisting of glycols, p-dioxanone, 1,5-dioxepan-2-one, and 1,4-oxathialan-2-one.

34. (new) The method of claim 31, wherein the light-degradable surface coupling agent comprises mixtures of a polymer and an organometallic compound or a metal salt, and the polymer comprises a polyolefin or a polyvinyl alcohol.

35. (new) The method of claim 31, wherein the light-degradable surface coupling agent comprises a functionalized siloxane made by coupling a ketone group with a silicon containing compound, the ketone group represented by the chemical structure:



where R is an alkyl, cycloalkyl, aryl, alkenyl, or alkaryl group containing from one to about 10 carbon atoms and R^1 is hydrogen or an alkyl, cycloalkyl, aryl, or alkaryl group containing from one to about 7 carbon atoms, the silicon containing compound comprising at least one selected from the group consisting of silane, hexamethyldisilazane, trimethylsilyldiethylamine, trimethylsilyldimethylamine, dimethylsilyldiethylamine, dimethylsilyldimethylamine, tetramethyldisilazane, trimethylmethoxysilane, trimethylethoxysilane, trimethylpropoxysilane, trimethylacetoxysilane, bis(dimethylamino)dimethylsilane, bis(dimethylamino)methylsilane, methyldimethylaminoethoxysilane, methyldimethoxysilane, methyldiethyoxysilane, dimethyldimethoxysilane, dimethyldiethoxysilane, and methyltrimethoxysilane.